

predominantly undeveloped watersheds), Outstanding Resource Waters (ORW), nor HQW (High Quality Waters) occur within 1.0 mile of the project study area. This section of Muddy Creek is not listed on the North Carolina 2012 Final 303(d) list of impaired waters nor is any waters within 1.0 mile of the project study area (NCDWQ 2012). There are no benthic or fish sampling sites within 1.0 mile of the project study area.

### **Biotic Resources**

Design alternatives have yet to be identified for this project, therefore, the estimated area of impact to these natural communities has not been calculated. Table 3 quantifies the natural communities within the project study area; however, actual impact acreage within the construction limits will be less. Impacts to plant communities associated with construction activities include the removal of vegetation, soil compaction, damaging and/or exposing root systems, as well as potential impacts associated with petroleum spills.

**Table 3: Coverage of terrestrial natural communities in the project study area.**

<b>Community</b>	<b>Coverage (acres)</b>
Piedmont/Low Mountain Alluvial Forest	0.33
Basic Mesic Forest	0.58
Maintained Disturbed	16.91
Total	17.82

### **Jurisdictional Topics**

#### **Surface Waters and Wetlands**

No jurisdictional wetlands were identified within the project study area.

#### **Permits**

The proposed project has been designated as a Categorical Exclusion (CE) for the purposes of NEPA documentation. As a result, a Nationwide Permit (NWP) 23 will likely be applicable. Other permits that may apply include NWP 33 for temporary construction activities such as stream dewatering, work bridges, or temporary causeways that are often used during bridge construction or rehabilitation. The USACE holds final discretion as to what permit will be required to authorize project construction. In addition to the 404 permit, other required authorizations include the corresponding Section 401 Water Quality Certification (WQC) from NCDWQ. A NCDWQ Section 401 Water Quality General Certification for a Categorical Exclusion (GC 3701) may be required prior to the issuance of a Section 404 Permit. Other required 401 certifications may include a GC 3366 for temporary construction access and dewatering.

#### **Federally Protected Species**

As of January 31, 2008 the United States Fish and Wildlife Service (USFWS) lists two federally protected species for Davidson County (Table 4). A brief description of each species' habitat requirements follows, along with the Biological Conclusion rendered based on